

### SUMMARY OF THE INVENTION

The use of gene therapy for the treatment of different kinds of fibrosis in human beings is disclosed. The purpose is the use of "therapeutic" genes specifically directed to target organs to revert and/or prevent the development of the fibrosis process.

The potential application of gene therapy to patients with fibrosis and/or cirrhosis will depend to a large extent on the successful delivery of genes which encode for therapeutic proteins to livers with severe fibrosis and that these genes which encode for proteins human MMP-8 active and latent, MMP-1, MMP-2, MMP-9 and MMP-13; human uPA wild type and/or modified (or its truncated version), the truncated receptor for TGF- $\beta$  type II and Smad-7 can be directed by adenovirus and/or other recombinant vectors that cannot transduce (infect) others organs. The recombinant adenoviruses (AdR) are vectors highly efficient for the transduction of therapeutic genes to diverse target cells. We have proved that they can carry genes to cirrhotic livers.

The delivery of therapeutic genes through such adenoviral vectors and other recombinant vectors could also be performed using cationic and anionic liposomes (DOTMA).

Therefore, we propose the use of this patent to be applied in the same manner to:

- \*Renal fibrosis
- \*Pulmonary fibrosis
- \*Hypertrophic and keloid scars (skin fibrosis), and
- \*Other kinds of fibrosis.

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